

COMBITUBE

INDICATIONS:

- Cardiac arrest.
- Respiratory arrest:
 - Unconscious.
 - No gag reflex.
 - Apnea or respiratory rate < 6/minute.
- Appears ≥ 12 years.
- Appears at least 4 feet tall (for SA size) or 5 feet tall (for regular size).

CONTRAINDICATIONS:

- Obvious signs of death.
- Do-Not-Resuscitate.
- Gag reflex.
- Won't advance due to resistance.
- Known esophageal disease (cancer, varices, surgery).
- Known ingestion of caustic substance.
- Known narcotic OD (if ALS < 10 minutes ETA).
- Laryngectomy patient with stoma.

COMMENTS:

- May be able to continue CPR during attempts.
- Maximum 30 seconds per attempt.
- Only one attempt per one minute cycle of CPR.
- Insertion may be attempted a maximum of three times.
- The EDD is only to be used on tube #2.

EQUIPMENT:

- Combitube, regular size (required); SA (small adult) size recommended.
 - Right angle emesis deflector.
 - 140 mL syringe.
 - 20 mL syringe.
 - Suction catheter.
 - Esophageal intubation detector device/syringe (EDD).
 - Lubricant (water soluble).
 - ET tube holder, tape (optional).
 - Oxygen.
 - Bag-valve-mask. 40L/min. resuscitator, optional.
- } Included in most Combitube kits.

PREPARATION OF EQUIPMENT:

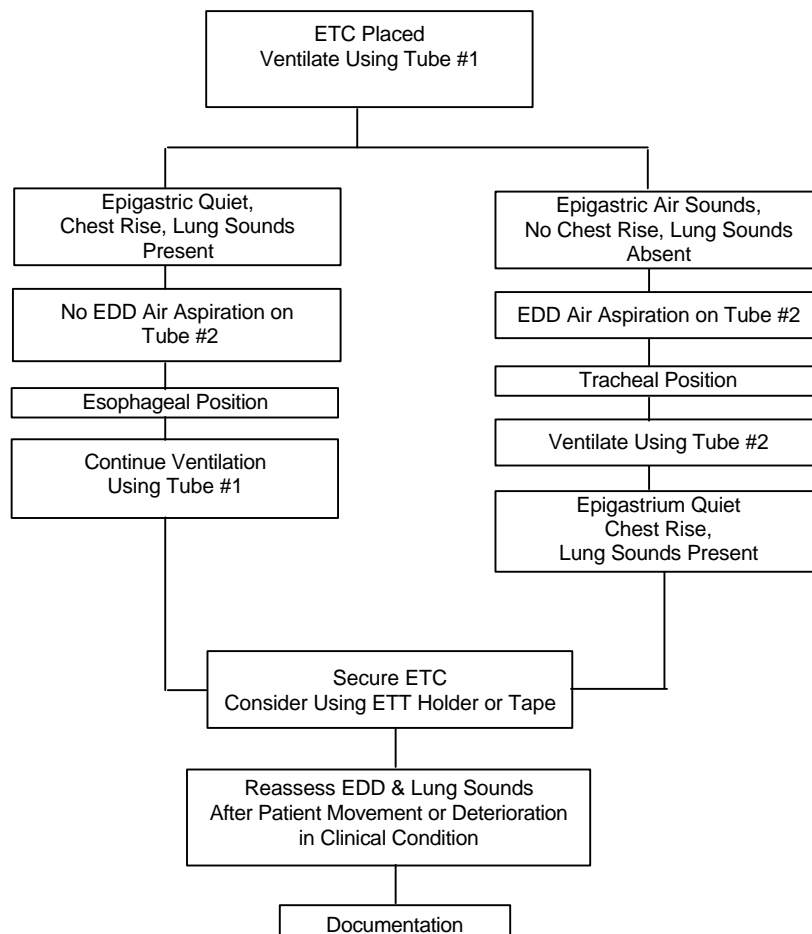
- Assemble all equipment.
- Inflate cuffs on the Combitube to test for leaks. Deflate.
- Attach emesis deflector to tube #2.
- Lubricate distal tip and sides of Combitube; avoid occluding air holes.

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PROCEDURE:

- Ventilate the patient with 100% oxygen prior to Combitube insertion.
- Place the head in a neutral position.
- Grasp the lower jaw with the thumb and index finger and lift. Hold the Combitube in the other hand (with its curvature in the same direction as the natural curvature of the pharynx).
- Blindly insert the tube gently into the mouth and advance into the throat until the front teeth are between the two black rings on the tube.
- Do not force the tube. If the tube does not advance easily, redirect it or withdraw and reinsert.
- Inflate cuff #1 with 100 mL of air (85 mL for SA size).
- Inflate cuff #2 with 15 mL of air (12 mL for SA size).

EVALUATE TUBE PLACEMENT:



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VENTILATE THE PATIENT:

- Ventilate the patient with 100% O₂ by means of a bag-valve breathing device or 40 L/min resuscitator.
- Observe for bilateral rise and fall of the chest.
- Auscultate the epigastric area for absence of abdominal sounds, and the lungs bilaterally for breath sounds.

SECURE AIRWAY:

- Consider using ET tube holder or tape to secure tube.
- Consider c-collar or other means to immobilize head to minimize movement.
- Reassess the tube position frequently during the call, each time the patient is moved, or the tube is manipulated.
 - Observe continuously for bilateral rise and fall of the chest.
 - Auscultate for ventilation sounds over the lungs bilaterally and over the stomach.
 - Test placement of tube with EDD.
- The patient should be ventilated between each attempt.
- Each attempt may take no longer than 30 seconds.

DOCUMENTATION:

Documentation shall include:

- Presence of bilateral breath sounds and absence of abdominal sounds.
- EDD on tube #2 indicated resistance (esophageal placement) or free air aspirated (tracheal placement).
- Location of the Combitube in the esophagus or trachea.
- Which tube is being used to ventilate the patient (tube #1 or tube #2).
- Tube secured using tube holder or tape
- Use of c-collar or other means to immobilize head to minimize movement.
- Certification number of paramedic inserting tube.
- Number of attempts required.
- Reassessment of bilateral breath sounds and EDD each time patient is moved.
- Name of PRC physician verifying tube position.
- Any procedural problems or complications.

EXTUBATION:

- **Indications:**
 - Unable to auscultate breath sounds when ventilating via tube #1 or tube #2.
 - Mechanical failure of tube.
 - Return of gag reflex.
 - Patient regains consciousness.
 - Combative patient.

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EXTUBATION: (continued)

- **Procedure:**

- Consider decompressing stomach if tube in esophagus, using 12 fr catheter included in kit.
- Suction mouth.
- Turn patient on side.
- Deflate cuff #1.
- Deflate cuff #2.
- Remove Combitube with suction standing by.
- Monitor patient's respiratory status and intervene as necessary.
- Provide supplemental oxygen.

PROBLEM SOLVING:

- Air leaking from mouth/nose
 - Add 20mL air to cuff #1.
 - If still leaking add additional 20 mL of air to cuff #1.
 - If still leaking assume cuff leak and remove tube.
- Insertion too far into esophagus.
 - No chest rise or breath sounds, when ventilating via tube #1.
 - Unable to pull back on EDD syringe.
 - Gurgling over abdomen , no chest rise, or breath sounds when ventilating via tube #2.
- Deflate cuff #1, then cuff #2, pull back 3 cm, re-inflate cuff #1, then cuff #2.
- Possible asthma, COPD or drowning:
 - Poor chest rise while ventilating via tube #1.
 - Distant breath sounds.
 - Can't pull back on EDD syringe.
 - No chest rise or breath sounds, gurgling over abdomen when ventilating via tube #2.
- ♦ EDD syringe and abdominal sounds may be most reliable assessments.
- If no breath sounds or gurgling and can't aspirate with EDD syringe—**Remove Combitube tube.**
- Unusual circumstances:
 - Patient position, examples: entrapment, arthritis of spine, patient cannot lie flat (supine).
- ♦ Insertion may be attempted as long as ventilation assessment can be completed.
- ♦ In rare situations, EDD syringe can be relied upon solely to determine tube position.
 - Unilateral breath sounds with absent gastric sounds (a right mainstem placement is unlikely with Combitube):
- ♦ Pneumothorax.
- ♦ Hemothorax.
- ♦ Pneumectomy.
- Leave Combitube in place and continue ventilation if EDD syringe confirms location.
 - Facial trauma:
- ♦ If unable to visualize cords for ET insertion or unable to get mask seal with BVM, insert Combitube.
- Suction prior to insertion.
- Avoid broken teeth, bone fragments.
- Maintain spinal stabilization.